

May 24, 2013

To: Executive Board

Subject: **Environmental and Sustainability Management System – ISO 14001 Certification**

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### **Recommendation**

Receive and file an update on Foothill Transit's receipt of International Organization for Standardization (ISO) 14001 certification for its Environmental and Sustainability Management System (ESMS) at the Arcadia Operations and Maintenance Facility.

### **Background**

An ESMS is a comprehensive set of procedures, based on an environmental policy that manages an organization's environmental impacts in a strategic manner. Each procedure reflects one of 17 required elements of an ESMS, mandated in the ISO 14001:2004 environmental management standards. The seventeen elements are listed below:

1. *Environmental Policy*
2. *Environmental Aspects*
3. *Legal and Other Requirements*
4. *Objectives, Targets, and Programs*
5. *Resources, Roles, Responsibilities, and Authority*
6. *Competence, Training, and Awareness*
7. *Communication*
8. *Documentation*
9. *Control of Documents*
10. *Operational Control and Contractor Management*
11. *Emergency Preparedness and Response*
12. *Monitoring and Measurement*
13. *Evaluation of Compliance*
14. *Nonconformity, Corrective, and Preventative Action*
15. *Control of Records*
16. *Internal Audit*
17. *Management Review*

The implementation of an ESMS has been supported by the Federal Transit Administration (FTA) as "the clearest commitment of an agency to demonstrate environmental stewardship and sustainability." As such, in 2010 Foothill Transit applied and was accepted into the 2011 FTA ESMS Institute for transit agencies. This rigorous training is funded by the FTA and administered by Virginia Polytechnic Institute and State University (Virginia Tech). Over the course of 18 months, Virginia Tech aided

Executive Board Meeting – 05/24/13  
Environmental and Sustainability Management System  
– ISO 14001 Certification  
Page 2

Foothill Transit in the development and implementation of an ESMS at the Arcadia Operations and Maintenance Facility, following the ISO 14001 standards.

Foothill Transit is among very few transit agencies in the nation operating a transit maintenance facility under world class ISO 14001 standards.

## Analysis

As part of the ESMS program, each year Foothill Transit identifies all environmental aspects associated with the daily operational activities at the maintenance facility. All actual and potential environmental impacts, from bus washing to disposal of batteries, are considered. Then, a select number of activities are chosen as “significant environmental aspects.” These aspects are critically focused on and objectives and targets are developed to mitigate each one. This is an annual and ongoing process.

Foothill Transit has realized significant accomplishments as a result of the first cycle of program implementation. The specific achievements are detailed below.

- The first goal was to reduce compressed natural gas (CNG) leak and spill incidents during fueling by 50 percent by July 2012. As a result of retraining staff members, posting standard operating procedures, the installation of a new CNG leak detection system, and an associated “know your colors” campaign, the location or “fence line” has had zero spills and releases since program implementation, resulting in a reduction of 100 percent of leak and spill incidents while fueling. This accomplishment greatly exceeds our initial goal.
- The second goal was to reduce the amount of hazardous waste generated from cleaning solvents by 20 percent by July 2012. The ESMS Core Team worked with the Contractor to identify material utilization, remove obsolete inventory, and identify alternate, “green” products to replace existing hazardous solvents. As a result of these actions, the fence line removed 19 gallons of hazardous materials from the site and 47 percent of identified hazardous cleaning products were replaced with alternatives, exceeding the stated objective. By removing obsolete inventory and replacing existing inventory, Foothill Transit is now avoiding the purchase of 489 gallons of hazardous inventory annually.
- The third goal was to reduce energy consumption by 20 percent by July 2012. To meet this goal, a solar photovoltaic (PV) system was installed and producing solar energy in January 2012. To date, Foothill Transit has generated over 260,000 kilowatt hours of clean, solar power. In one year, we will receive nearly \$45,000 in the form of an incentive from our utility provider, Southern California

Executive Board Meeting – 05/24/13  
Environmental and Sustainability Management System  
– ISO 14001 Certification  
Page 3

Edison. Every year, the clean energy produced by the solar installation is expected to equate to 26,000 gallons of gasoline saved.

- The fourth goal was to train 100 percent of employees on the Operations and Maintenance Facility's Storm Water Pollution Prevention Program (SWPPP). The SWPPP was updated by an external consultant to comply with all federal and state laws. To date, 100 percent of relevant employees are aware, trained, and competent related to the SWPPP, meeting the stated objective.
- The fifth and final goal was to reduce fuel consumption from the time spent idling by 10 percent. To accomplish this goal, an agency-wide Idle Reduction Policy developed and implemented that limited idling time to five minutes or fewer while Foothill Transit logoed vehicles were in operation. Since the policy went into effect, bus idling at the Arcadia Operations and Maintenance Facility has been reduced by 19 percent, exceeding our original goal. In one year, we expect to reduce CO<sub>2</sub> emissions by 170,000 tons.

Further details on Foothill Transit's environmental performance can be found in **Attachment 1: ESMS 2012 Annual Review.**

### Budget Impact

The cost of the ISO 14001 certification audit \$9,950. The certification is valid for three years and requires two annual surveillance audits, each at a cost of \$4,400. As such, this cost is spread out over a period of three years. Funding for this project is included in the approved FY 2013 business plan. The cost of the surveillance audit for 2014 is included in the proposed FY 2014 Business Plan and Budget.

Sincerely,



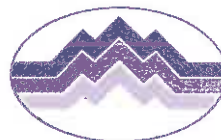
Roland M. Cordero  
Director of Maintenance & Vehicle Technology



Doran J. Barnes  
Executive Director

Attachment

# ESMS 2012 Annual Review



**Foothill Transit**

January 25, 2013

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## Contents

Foothill Transit Environmental Policy .....	2
Results of internal audit(s) .....	3
Results of environmental compliance audit(s).....	4
Communication from external interested parties, including complaints .....	5
Current environmental performance of Foothill Transit.....	6
Progress on Objectives, Targets, and Programs .....	15
Status of corrective and preventative actions .....	18
Follow-up items from previous Management Review meetings.....	19
Changing circumstances, including: .....	19
Keys to Success and Recommendations for improvement.....	19

## **Foothill Transit Environmental Policy**

The mission of Foothill Transit to be the premier public transit provider committed to safety, courtesy, quality, responsiveness, efficiency, and innovation. The protection of the environment is one of Foothill Transit's most important responsibilities as we accomplish our mission.

As such, the Foothill Transit Environmental Policy serves as written communication of Foothill Transit's intent to implement sustainable, innovative solutions that measure and improve our environmental performance through a formal Environmental and Sustainability Management System (ESMS).

Through this policy Foothill Transit commits to:

- Environmental protection and sustainability in the planning stages of new programs, construction, and in all work conducted at Foothill Transit.
- Compliance with applicable local, state, and federal regulations and policies, supported by regularly-scheduled internal review.
- Minimization of significant environmental impacts identified in the ESMS by establishing environmental and sustainability objectives, targets, and programs.
- Evaluation of the effectiveness of Foothill Transit's environmental performance through the periodic review of Foothill Transit's ESMS to ensure that established objectives, targets, and programs are met.
- Provide necessary education and tools to all Foothill Transit staff and those working on Foothill Transit's behalf in order to successfully carry out this policy in their daily responsibilities and work functions.
- Strive for continued overall improvements in environmental consciousness and prevention of pollution.

The Foothill Transit environmental policy will be communicated annually to all Foothill Transit team members and those working on Foothill Transit's behalf, including all contractors and vendors, and will be made available to the public via Foothill Transit's website. In order to fulfill the commitments made in this policy, all Foothill Transit team members and those working on Foothill Transit's behalf are responsible for incorporating this policy into their plans and work.

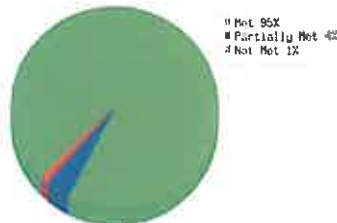
## Results of internal audit(s)

The purpose of the Internal Audit is to determine whether Foothill Transit's Environmental and Sustainability Management System (ESMS) and operations of Foothill Transit conform to the ISO 14001 standard, the ESMS policy, ESMS procedures, and legal and other requirements. The first Internal Audit was conducted by two third party representatives from Virginia Tech University on July 23 and 24, 2012. The results of the first Internal Audit are as follows:

### Overall EMS Performance Results

This section compares the percentage of requirements *met*, *partially met* and *not met* with respect to meeting the requirements of an EMS as specified in the ISO 14001 2004 standard. The following scores are the result of the EMS audit presented in this report:

Percent meeting all requirements "Overall Score"	97%
Percent of requirements "Met"	95%
Percent of requirements "Partially Met"	4%
Percent of requirements "Not Met"	1%



	The ISO 14001:2004 standard elements of an EMS	Overall Score (%)	Met (%)	Partially Met (%)	Not Met (%)
4.1	General Requirements	100	100	0	0
4.2	Environmental Policy Requirements	100	100	0	0
4.3.1	Environmental Aspects Requirements	100	100	0	0
4.3.2	Legal and Other Requirements	100	100	0	0
4.3.3	Objectives, Targets and Programs Requirements	100	100	0	0
4.4.1	Resources, Roles, Responsibility and Authority	100	100	0	0
4.4.2	Competence, Training and Awareness	93	86	14	0
4.4.3	Communication	100	100	0	0
4.4.4	EMS Documentation	100	100	0	0
4.4.5	Control of Documents	94	89	11	0
4.4.6	Operational Control	100	100	0	0
4.4.7	Emergency Preparedness and Response	100	100	0	0
4.5.1	Monitoring and Measurement	100	100	0	0
4.5.2	Evaluation of Compliance	75	50	50	0
4.5.3	Nonconformity, Corrective Action and Preventive Action	100	100	0	0
4.5.4	Control of Records	100	100	0	0
4.5.5	Internal Audits	100	100	0	0
4.6	Management Review	83	83	0	17

Going forward, the ESMS Management Representative (or his/her designee) will coordinate the implementation of an *Internal ESMS Audit* on an *annual*



basis (May 1), at a minimum. All elements of the ESMS (or ISO 14001 standard) will be included in the audit scope. The audit schedule will be based on the environmental importance of the activity concerned and the results of previous audits.

### **Results of environmental compliance audit(s)**

The purpose of the annual Environmental Compliance Audit is to ensure that compliance with relevant environmental legislation and regulations is being evaluated on an annual basis (June) for the Foothill Transit Arcadia Facility.

Since Foothill Transit was contractually required to perform a site assessment as part of the Contractor “turnover” process in Arcadia, this third party audit was used as our Evaluation of Compliance Audit for 2012. Strata Environmental (Strata) was chosen to provide a third party Phase I Environmental Site Assessment (ESA) of the real property, physical structures, and operations of the Arcadia Operations and Maintenance Facility. This audit was conducted in July 2012 and the assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Property. The audit included the following scope:

*Legal Description*

*Structures, Roads, and Other Improvements on the Site*

*Current Uses of the Property*

*Historical Information*

*Current and Historical Uses of Adjoining Properties*

*Standard Environmental Records*

*Subject Property*

*Surrounding Properties*

*Additional Environmental Record Sources*

*Hazardous Substances and Petroleum Products*

*Storage Tanks*

*Solid and Hazardous Waste*

*Polychlorinated Biphenyls*

*Air Emissions*

*Storm Water and Wastewater Discharges*

*Asbestos-Containing Materials*

*Interviews*

*Environmental Cleanup Liens or Activity and Use Limitations (40 CFR 312.25, 312.26)*

*Specialized Knowledge or Experience (40 CFR*

*Valuation Reduction for Environmental Issues (40 CFR 312.29)*

*Commonly Known or Reasonably Ascertainable Information (40 CFR 312.30)*

*Obvious Indicators of Contamination (40 CFR 312.31)*



Going forward, the annual Evaluation of Compliance Audit will be conducted internally. No more than 15 months will elapse between audits.

### **Communication from external interested parties, including complaints**

Environmental inquiries and complaints communicated by interested parties should be forwarded to the Director of Maintenance and Vehicle Technology by Customer Comments Personnel. Customer Comments Personnel review inquiries on a case-by-case basis and document the non-routine inquiries using Environmental Communication Occurrence forms. The completed form and related documentation become hard copy records maintained by the Director of Maintenance and Vehicle Technology.

During 2012, Foothill Transit received two environmental complaints. One was from a Foothill Transit customer and the other was from an Arcadia operator. Both complaints have been responded to and are considered "closed" at this time. Details of each complaint are provided below.

#### **Complaint #1**

Date Received: 02/01/12

Method of Complaint: Email, Customer Comment Process

Complaint: Smoking bus

Respondent: Operations

Response Date: 02/01/12

Response: Bus was immediately removed from service

#### **Complaint #2**

Received: 04/27/12

Method of Complaint: Oral, During ESMS Training

Complaint: Improper disposal of materials into Storm Drain

Respondent: Arcadia GM

Response: Storm drains labeled, retraining of staff

## Current environmental performance of Foothill Transit

The table below conveys the highlights of Foothill Transit's environmental performance in 2012.

### ESMS Performance Tracking for Senior Management Reporting

1.0	Number of significant aspects in the ESMS: 5
2.0	Number of objectives and targets met: 5
3.0	Number of ESMS Team meetings: 42
4.0	Percentage of employees completing ESMS training: 98%
5.0	Estimated cost savings associated with ESMS: TBD
6.0	Number of complaints from community and/or number of responses to complaints: 2
7.0	Number of pollution prevention ideas generated by employees: 2
8.0	Number of ESMS documents created: 234
9.0	Number of corrective action requests (CARs) written: 5
10.0	Average time for resolving corrective actions: 2-4 weeks
11.0	Number of <u>ESMS</u> Audits conducted: 2
12.0	Number of Environmental <u>Compliance</u> Audits conducted: 1

Foothill Transit measures environmental performance on a monthly and annual basis by monitoring and measuring specific indicators that are directly related to the significant environmental aspects, operations and activities which have the potential to impact the environment.

A listing of all environmental impacts at the fenceline is detailed below. From this list, Foothill Transit chose five "significant aspects" to implement objectives, targets, and programs for in 2011. This list remained the same for 2012 as we continued to implement the program.

Main Activity	Sub Activity	Environmental Aspects
Fueling	Fueling CNG Buses	CNG fumes
		Leaks and spills while fueling
	Fueling CNG Cars	CNG fumes

		Leaks and spills while fueling
	AST Diesel	Diesel Fumes
	AST CNG	CNG Fumes
	Idling	Fuel Use and CNG Fumes
Storm Water Runoff	Storm Water Runoff Pollution Prevention Plan	Storm Water Runoff
Cleaning	Bus Wash	Water Runoff
	Engine Steam Cleaning	Contaminated Water Runoff
	Radiator Cleaning	Dirt and Debris Blowout
	Facility, Shop and Office	Contaminated Water Runoff
		Trash Generation
Fleet Maintenance	Oil & Coolant change	Used Oil
		Virgin Oil
		Coolant
		Coolant Filters
	Brake service	Used brake pads
		Used brake rotors
		Used brake drums
	Painting	Overspray
		Mixing products
		Unused paint
	Tire service	Used tires
	Miscellaneous repairs	Exhaust
Fueling	Fueling CNG Buses	CNG fumes
		Leaks and spills while fueling
	Fueling CNG Cars	CNG fumes
		Leaks and spills while fueling
	AST Diesel	Diesel Fumes
	AST CNG	CNG Fumes
	Idling	Fuel Use and CNG Fumes
Storm Water Runoff	Storm Water Runoff Pollution Prevention Plan	Storm Water Runoff
Cleaning	Bus Wash	Water Runoff
	Engine Steam Cleaning	Contaminated Water Runoff

	Radiator Cleaning	Dirt and Debris Blowout
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	AST CNG	CNG Fumes
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Storm Water Runoff	Storm Water Runoff Pollution Prevention Plan	Storm Water Runoff
Cleaning	Bus Wash	Water Runoff
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	AST Diesel	Diesel Fumes
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	Idling	Fuel Use and CNG Fumes
Storm Water Runoff	Storm Water Runoff Pollution Prevention Plan	Storm Water Runoff
Cleaning	Bus Wash	Water Runoff
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	Brake service	Used brake pads
		Used brake rotors
		Used brake drums
	Painting	Overspray
		Mixing products
		Unused paint
	Tire service	Used tires
	Miscellaneous repairs	Exhaust

Foothill Transit's environmental Performance data is shown in greater detail below for calendar year 2012 specifically related to environmental aspects.

The table below shows the contaminated fluids and absorbents (from cleaning solvents) that were removed or replaced in 2012.

Manufacturer	Product /Chemical Name	Volume removed from inventory (G)	Annual Volume Generation Reduction (G)	Reduction plan	Status	Alternate product	Products Replaced with Eco-Friendly Product
3M	QUICK FIX ADHESIVE	0.75	5.50	Use current inventory and removed from inventory purchase	Exhausted and replaced 2/11/12	QUICK FIX ADHESIVE KIT	
CANDLE LAMP CO.	ILDIFIED ETHANOL + B66 / GELLED ETHANOL	0.50	1.50	Exhausted inventory Removed from Approved Inventory list.	Exhausted and removed 3/19/12	None (specialty product)	
CASTROL CANADA INC.	AUTRAN SYN 295	6.00	20.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 2/11/2012	None (specialty product)	
CLOROX PROFESSIONAL PRODUCTS	BLEACH TOILET BOWEL CLEANER	2.00	52.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 2/11/2012	Relaced with Zep Simple Green	1
CLOROX PROFESSIONAL PRODUCTS	TILEX BATHROOMCLEANER	1.00	52.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 2/11/2012	Relaced with Zep Simple Green	1
CLOROX PROFESSIONAL PRODUCTS	HIGH EFFICIENCY BLEACH CLEANER	3.00	30.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 2/11/2012	Relaced with Zep Simple Green	1
COLGATE-PALMOLIVE	AJAX CLEANER	0.16	40.03	Returned to vendor - Non RMA	Removed from approved inventory 10/26/2011	Relaced with Zep Non Toxic Scrubbing compound	1



CORE PRODUCTS CO. INC.	HYDROXI PRO GROUT SMART	0.13	0.63	Returned to vendor /Non RMA	Removed from approved inventory 10/26/2011	None (specialty product)	
CRC INDUSTRIES INC.	ELECTRICAL SILICONE LUBRICANT	0.50	6.00	Exhausted inventory Removed from Approved Inventory list.	Exhausted and replaced 2/11/12	MARINE QD ELECTRONIC CLEANER	1
CSI PRODUCTS INC.	QUICK CLEAN ALL PURPOSE CLEANER	1.00	52.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 12/1/2011	Relaced with Zep Simple Green	1
DAP INC.	SQUEEZE & FILL CONCRETE CRACK FILLER	0.13	3.25	Returned to vendor /Non RMA	Removed from approved inventory 10/26/2011	KWIK SEAL PLUS - CLEAR ADH. CAULK	1
DRACKETT PROFESSIONALS	PLEDGE AEROSOL	0.83	23.23	Returned to vendor - Non RMA	Removed from approved inventory 10/26/2011	None (specialty product)	
ENFORCER PRODUCTS INC.	FOUR HOUR FOGGER	0.09	0.28	Returned to vendor - Non RMA	Removed from approved inventory 10/26/2011	None (specialty product)	
FIBRE GLASS-EVERCOAT	FIBERGLASS-AUTO RESIN	1.50	72.00	Exhausted inventory Removed from Approved Inventory list.	Removed from approved inventory 1/26/2012	UNIVERSAL REPAIR FILLER	1
GE SILICONES	SILICONE SEALANT	0.50	4.50	Returned to vendor /Non RMA	Removed from approved inventory 1/26/2012	None (specialty product)	
GILLETTE	GOJO LUXURY FOAM HANDWASH	0.50	6.00	Returned to vendor /Non RMA	Removed from approved inventory 1/26/2012	None (specialty product)	



GOJO INDUSTRIES	PURELL INSTANT HAND SANITIZER	0.50	120.41	Returned to vendor /Non RMA	Removed from approved inventory 1/26/2012	None (specialty product)	
							8
	Gallons Removed from Inventory	<u>19.09</u>	Gallons Avoided Annually	<u>489.32</u>		Percent of Products Replace with Eco-Friendly Alternative	<u>47.06%</u>

The table below shows the amount of solar power generated, rebate incentive amount, and environmental benefits of the solar PV system that went "online" in Arcadia in 2012.

Production					
From	To	Solar Energy Produced (kWh)	SCE Incentive amount	Tons of CO <sub>2</sub> Saved	Gallons of Gasoline Saved
02/01/12	02/29/12	17,056.17	\$2,557.24	12	1,486
03/01/12	03/31/12	22,668.07	\$3,398.64	16	1,974
04/01/12	04/30/12	28,206.49	\$4,229.02	20	2,457
05/01/12	05/31/12	29,668.27	\$4,448.19	21	2,584
06/01/12	06/30/12	30,470.60	\$4,568.49	22	2,654
07/01/12	07/31/12	29,925.41	\$4,486.74	21	2,607
08/01/12	08/31/12	27,012.95	\$4,050.07	19	2,353
09/01/12	09/30/12	25,304.44	\$3,793.91	18	2,204
10/01/12	10/31/12	20,176.17	\$3,025.03	14	1,757
11/01/12	11/30/12	15,675.06	\$2,350.17	11	1,365
12/01/12	12/31/12	12,870.33	\$1,929.66	9	1,121
Solar Power Generated to Date (kWh)			259,033.96		
SCE Incentive Amount Received to Date			\$38,837.16		
Tons of CO <sub>2</sub> saved			186		
Gallons of gasoline saved			22,562		

The table below shows the progress made on Storm Water Pollution Prevention (SWPP) in 2012.

Month	Percent of Storm Drains Labeled	Percent of Employees Trained on Updated Program	Percent of employees who've demonstrated comprehension
Sep-11	0%	N/A	N/A
Oct-11	0%	0%	N/A
Nov-11	0%	0%	N/A
Dec-11	0%	100%	
Jan-12	0%	100%	
Feb-12	0%	100%	
Mar-12	100%	100%	
Apr-12	100%	100%	
May-12	100%	100%	
Jun-12	100%	100%	
Jul-12		Will reevaluate training needs with new First Transit staff	Will reevaluate training needs with new First Transit staff
Aug-12	100%	100%	
Sep-12	100%	100%	
Oct-12	100%	100%	
Nov-12	100%	100%	
Dec-12	100%	100%	

The table below shows the fuel saved from the Idle Reduction Policy, implemented in 2012,

Month, Year	TOTAL Bus Idle Time (HOURS)	Fuel Consumption Equivalent (GGE)	Idle Time/Bus (HOURS)	Fuel consumption equivalent per bus (GGE)	GGE Variance (over baseline)	% Variance (over baseline)	Emissions Benefits (LBS CO2 reduced over baseline)	Monthly Cost Savings
Nov-11	2,920.00	2,190.00	23	17.24				
Dec-11	3,003.00	2,252.25	24	17.73				
Jan-12	3,228.00	2,421.00	25	19.06				
Feb-12	2,639.00	1,979.25	21	15.58	411	-13.48%	10,019.54	\$500.76
Mar-12	2,818.00	2,113.50	22	16.64	232	-7.62%	5,659.33	\$282.84
Apr-12	3,034.00	2,275.50	24	17.92	16	-0.54%	397.86	\$19.88
May-12	2,786.00	2,089.50	22	16.45	264	-8.67%	6,438.81	\$321.80
Jun-12	996	747	8	5.88	2,054.33	-67.35%	50,040.85	\$6,594.41
Jul-12	3,164	2,373	25	18.69	-113.67	3.73%	-2,768.77	-\$138.38
Aug-12	4,138	3,104	33	24.44	-1,087.67	35.66%	-26,494.12	-\$1,324.13
Sep-12	2,714	2,036	21	16.03	336.33	-11.03%	8,192.64	\$409.45
Oct-12	2,681	2,011	21	15.47	369.33	-12.11%	8,996.47	\$449.63
Nov-12	2,721	2,041	19	14.58	329.33	-12.10%	8,022.13	\$400.93
Dec-12	3,003	2,252	21	16.09	47.33	-1.55%	1,152.98	\$57.62

Baseline Total Average Idle Hours (Before Policy)	3,050.33
Total Average Idle Hours After Policy	2,790.36
% Variance	-8.52%
Variance HOURS	260
Baseline Idle Time/Bus (Before Policy)	24.02
Average Idle Time/Bus After Policy	21.55
Total Tons CO2 Reduced to Date	69,657.71
Total GGE Fuel Saved to Date	2,859.67
Total Cost Savings to Date	\$7,574.82

## Progress on Objectives, Targets, and Programs

The ESMS Core Team developed the below-listed objectives and targets to correspond with the five significant environmental aspects identified during the annual aspects identification process.

Aspect	Objective	Target
1. CNG Fuel Leaks and Spills	Reduce leaks and spills while fueling CNG buses.	Reduce by 50% by incident by 07/01/2012.
2. Storage of Contaminated Fluids and Absorbents	Reduce amount of hazardous waste generated.	Reduce by 20% by volume by 07/01/2012.
3. GHG Emissions Reductions	Reduce GHG emissions and energy consumption.	Reduce by 20% by 07/01/2012.
4. Storm Water Runoff	Develop a training program for existing SWPPP.	100% employees trained and tested on comprehension by 09/01/2012.
5. Fuel Consumption from Idling	Reduce fuel consumption from idling.	Reduce fuel consumption by 10% in time spent idling 07/01/2012.

In order to further prioritize our organization's significant aspects and translate the stated goals of our newly-adopted Environmental Policy into action, the ESMS Core Team set out to develop specific action plans around each of the five identified aspects. Each action plan outlined specific tasks to meet the stated objectives. The tasks are listed in the table below.



Aspect	Tasks
1. CNG Fuel Leaks and Spills  	<ol style="list-style-type: none"> <li>1. Establish a baseline</li> <li>2. Develop a fueling SOP for buses and cars (ESMS SOP01)</li> <li>3. Update SOP to reflect ISO standards</li> <li>4. Identify equipment-related issues</li> <li>5. Correct failures</li> <li>6. Request and monitor preventative maintenance (PM) schedule and work order confirmation from Clean Energy</li> <li>7. Have detection alert parameters lowered</li> <li>8. Install audible and visual warning system</li> <li>9. Monitor and measure incidents of CNG releases (outlined in #1)</li> </ol>

Figure 1 Gas Detection System Visual Warning System

	<ol style="list-style-type: none"> <li>10. Identify Training Needs for ESMS SOP01 (CNG Fueling SOP for buses and cars)</li> <li>11. Conduct SOP and warning system training</li> </ol>
<p>2. Storage of Contaminated Fluids and Absorbents</p>  <p>Figure 2 Sample Product Replaced with Non-Hazardous Product</p>	<ol style="list-style-type: none"> <li>1. Identify current specifications (vehicle-related reduction)</li> <li>2. Identify current material utilization (establish baseline)</li> <li>3. Identify vendor-related reductions and obsolete inventory</li> <li>4. Identify alternate (non-hazardous) products and replace in increments of 10</li> <li>5. Include labeling and MSDS check as part of Facility Maintenance Plan (FMP)</li> <li>6. Identify Training Needs</li> <li>7. Conduct training for ESMS SOP05 (Spill Prevention Control and Countermeasure Plan)</li> <li>8. Monitor waste generation reduction monthly</li> </ol>
 <p>Figure 3 Arcadia Facility Solar PV Panels</p> <p>3. GHG Emissions Reductions</p>	<ol style="list-style-type: none"> <li>1. Review and approve Contractor's submittals for solar project</li> <li>2. Complete construction</li> <li>3. Test and commission</li> <li>4. Solar turnover system training with Facility Manager</li> <li>5. Prepare SOP for preventative maintenance of PV panels (ESMS SOP02)</li> <li>6. Set baseline</li> <li>7. Review and compare energy invoices</li> <li>8. Conduct ESMS SOP02 Solar PMI Training</li> </ol>
<p>4. Storm Water Runoff</p>  <p>Figure 4 Labeled Storm Drain</p>	<ol style="list-style-type: none"> <li>1. Review current documented Storm Water Pollution Prevention (SWPPP)</li> <li>2. Review current training requirements</li> <li>3. Review monitoring system</li> <li>4. Review regulatory updates</li> <li>5. Review as-built drawings and identify storm drain and clarifiers</li> <li>6. Develop training program</li> <li>7. Implement training program on ESMS SOP03: SWPPP</li> </ol>



	<ol style="list-style-type: none"> <li>8. Label storm drains and clarifiers</li> <li>9. Conduct staff testing on SWPPP comprehension</li> </ol>
<p>5. Fuel Consumption from Idling</p>  <p><b>Figure 5 Revenue Vehicle Affected by Idle Reduction Policy</b></p>	<ol style="list-style-type: none"> <li>1. Establish a baseline</li> <li>2. Determine current regulatory idling requirements</li> <li>3. Develop Idle Reduction Policy ESMS-SOP04 and seek Operations Director approval</li> <li>4. Issue Idle Reduction Policy to all affected staff (both Operations and Maintenance Facilities)</li> <li>5. Identify training needs</li> <li>6. Train all affected staff on ESMS-SOP04: Idle Reduction Policy</li> <li>7. Have Quality Assurance Inspectors conduct random visual idling inspections (non-revenue vehicles) at selected time points</li> <li>8. Run monthly Zonar reports to monitor and measure revenue vehicle idling reductions</li> </ol>

Foothill Transit has realized significant accomplishments as a result of the ESMS program. The specific achievements are detailed below, by significant aspect and corresponding objective, target, and program.

The first goal was to reduce compressed natural gas (CNG) leak and spill incidents during fueling by 50% by July 2012. As a result of retrained fuelers, posted SOPs, the installation of a new CNG leak detection system, and an associated “know your colors” campaign, the fence line has had **zero spills and releases since program implementation, resulting in a reduction of 100% of leak and spill incidents while fueling.** This accomplishment greatly exceeds our initial goal.

The second goal was to reduce the amount of hazardous waste generated from cleaning solvents by 20% by July 2012. The ESMS Core Team worked with the Contractor to identify current material utilization, remove obsolete inventory, and identify alternate, “green” products to replace existing hazardous solvents. As a result of these actions, the fence line **removed 19 gallons of hazardous materials from the site and 47% of identified hazardous cleaning products were replaced with alternatives, exceeding the stated objective.** By removing obsolete inventory and replacing existing inventory, we are now avoiding the purchase of 489 gallons of hazardous inventory annually.

The third goal was to reduce energy consumption by 20% by July 2012. To meet this goal, a solar PV system was installed and producing solar energy in

January 2012. To date, we have generated over 250,000 kilowatt hours of clean, solar power. In one year, we will receive nearly \$45,000 in the form of an incentive from our utility provider, Southern California Edison. Every year, the clean energy produced by the solar installation is expected to equate to 26,000 gallons of gas saved.

The fourth goal was to train 100% of employees on the Operations and Maintenance Facility's Storm Water Pollution Prevention Program (SWPPP). The SWPPP was updated by an external consultant to comply with all federal and state laws. To date, 100% of relevant employees are aware, trained, and competent related to the SWPPP, meeting the stated objective.

The fifth and final goal was to reduce fuel consumption from the time spent idling by 10%. To accomplish this goal, we developed and implemented an agency-wide Idle Reduction Policy that limited idling time to five minutes or fewer while Foothill Transit logoed vehicles were in operation. Since the policy went into effect, we have reduced bus idling at the Arcadia Operations and Maintenance Facility by 19%, exceeding our original goal. In one year, we expect to reduce CO2 emissions by 170,000 tons.

### Status of corrective and preventative actions

As part of our program to correct and prevent environmental nonconformities, Foothill Transit's procedure dictates that we investigate nonconformities, determine their root causes, mitigate the environmental impact that nonconformities can have, and record the results achieved. Any nonconformities mandate the generation of a Corrective Action Request (CAR). The CARs generated in 2012 are listed below:

CAR <input type="checkbox"/>	PAP <input checked="" type="checkbox"/>	Report No.	Location of Issue	Description of Issue	Responsible Representative Issued to	Follow-up Date(s)	Completion Date
X		001	Arcadia/ Bus Washing	Operator observed the bus cleaning crew dumping their used water into the storm drains and also observed the cleaning crew dumping products into the ground	Lauren Festner	July 20, 2012	July 14, 2012
X		002	Arcadia/CNG Station	Equipment calibration past due	Aaron Lim	July 15, 2012	July 18, 2012
X		003	SOP	Gap Audit Finding: Aspect #2 missing an Operational Control	Lauren Festner	March 01, 2013	May 2012
X		004	Fueling Area	Pre-washing causing black runoff into storm drain. Stains and residue on pavement.	Roland Cordero	October 15, 2012	12/01/12
X		005	Arcadia Yard	Legal violation and citation. Missing SPCC	Fernando Ayala	September 1, 2012	September 5, 2012



## **Follow-up Items from previous Management Review meetings Changing circumstances, including:**

### *Products, activities, services*

The only change to the activities, products, and services in Arcadia during 2012 was the removal of six (6) diesel buses from the fleet. This will have a positive environmental impact on our aspects analysis when they are reviewed and ranked in February 2013.

### *Results of environmental aspects from planned or new developments*

The only new development in 2012 with an environmental aspect was the installation and activation of the solar PV panels in Arcadia. The impacts of this installation are accounted for in our objectives, targets, and programs.

### *Changes in legal requirements*

One new legal requirement was added in 2012 related to comprehensive recycling. This requirement was added to the Legal Matrix and the facility is currently in compliance with the regulation.

### *Views of interested parties*

There are no changes to the views of interested parties in 2012.

### *Advances in technology*

N/A

### *Emergency situations/accidents*

There are no reportable accidents or environmental emergency situations in 2012.

## **Keys to Success and Recommendations for Improvement**

Regularly-scheduled ESMS Core Team meetings have kept the team up-to-date on all tasks in order to meet the goals of our program, held us accountable, and have provided avenues for communication, necessary to ESMS implementation.

The ESMS Core Team also held two, all day in-house “workshops” in 2012, following the formal workshops administered by Virginia Tech. We collectively decided that these days provided an opportunity for us to review our ESMS as a whole, which is a key to program success. The in-house workshops were also necessary to discuss all ESMS action items in depth, and prioritize activities moving forward. The workshops were viewed by the ESMS Core Team as a success and will be held as needed moving forward.

Quarterly reporting to the Board of Directors and staff has helped to familiarize them with the ESMS program and keep them informed of progress. These updates will continue as we move forward with ISO 14001 Certification and as we carry the program over to the Pomona Operations and Maintenance Facility.

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Doran J. Barnes  
Executive Director

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Date

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Kevin McDonald  
Deputy Executive Director

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Date